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NEWS 1 Web Page for STN Seminar Schedule - N. America  
NEWS 2 JUL 28 CA/CAplus patent coverage enhanced  
NEWS 3 JUL 28 EPFULL enhanced with additional legal status information from the epoline Register  
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NEWS 13 SEP 26 WPIDS, WPINDEX, and WPIX coverage of Chinese and and Korean patents enhanced  
NEWS 14 SEP 29 IFICLS enhanced with new super search field  
NEWS 15 SEP 29 EMBASE and EMBAL enhanced with new search and display fields  
NEWS 16 SEP 30 CAS patent coverage enhanced to include exemplified prophetic substances identified in new Japanese-language patents  
NEWS 17 OCT 07 EPFULL enhanced with full implementation of EPC2000  
NEWS 18 OCT 07 Multiple databases enhanced for more flexible patent number searching  
NEWS 19 OCT 22 Current-awareness alert (SDI) setup and editing enhanced  
NEWS 20 OCT 22 WPIDS, WPINDEX, and WPIX enhanced with Canadian PCT Applications  
NEWS 21 OCT 24 CHEMLIST enhanced with intermediate list of pre-registered REACH substances  
NEWS 22 NOV 21 CAS patent coverage to include exemplified prophetic substances identified in English-, French-, German-, and Japanese-language basic patents from 2004-present

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,  
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

NEWS HOURS STN Operating Hours Plus Help Desk Availability  
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NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

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FILE 'HOME' ENTERED AT 09:09:07 ON 25 NOV 2008

=> file .meeting

'EVENTLINE' IS NOT A VALID FILE NAME

Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files that are available. If you have requested multiple files, you can specify a corrected file name or you can enter "IGNORE" to continue accessing the remaining file names entered.

ENTER A FILE NAME OR (IGNORE) : ignore

'IMSDRUGCONF' IS NOT A VALID FILE NAME

Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files that are available. If you have requested multiple files, you can specify a corrected file name or you can enter "IGNORE" to continue accessing the remaining file names entered.

ENTER A FILE NAME OR (IGNORE) : ignore

'MEDTCON' IS NOT A VALID FILE NAME

Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files that are available. If you have requested multiple files, you can specify a corrected file name or you can enter "IGNORE" to continue accessing the remaining file names entered.

ENTER A FILE NAME OR (IGNORE): ignore

FILE 'AGRICOLA' ENTERED AT 09:11:15 ON 25 NOV 2008

FILE 'BIOTECHNO' ENTERED AT 09:11:15 ON 25 NOV 2008

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FILE 'CONFSCI' ENTERED AT 09:11:15 ON 25 NOV 2008

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FILE 'LIFESCI' ENTERED AT 09:11:15 ON 25 NOV 2008

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FILE 'PASCAL' ENTERED AT 09:11:15 ON 25 NOV 2008

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UNMATCHED LEFT PARENTHESIS '(CD59'

The number of right parentheses in a query must be equal to the number of left parentheses.

```
=> (CD59 or (CD 59)) and (myocardial infarction)
L1      0 FILE AGRICOLA
L2      0 FILE BIOTECHNO
L3      0 FILE CONFSCI
L4      0 FILE HEALSAFE
L5      0 FILE LIFESCI
L6      0 FILE PASCAL
```

TOTAL FOR ALL FILES

```
L7      0 (CD59 OR (CD 59)) AND (MYOCARDIAL INFARCTION)
```

```
=> (CD59 or (CD 59)) and (myocardial infarction)
L8      0 FILE AGRICOLA
L9      5 FILE BIOTECHNO
L10     0 FILE CONFSCI
L11     0 FILE HEALSAFE
L12     3 FILE LIFESCI
L13     7 FILE PASCAL
```

TOTAL FOR ALL FILES

```
L14     15 (CD59 OR (CD 59)) AND (MYOCARDIAL INFARCTION)
```

```
=> dup rem
```

```
ENTER L# LIST OR (END):l14
```

```
PROCESSING COMPLETED FOR L14
```

```
L15      9 DUP REM L14 (6 DUPLICATES REMOVED)
```

```
=> d l15 ibib abs total
```

```
L15 ANSWER 1 OF 9 PASCAL COPYRIGHT 2008 INIST-CNRS. ALL RIGHTS RESERVED. on
      STN
```

ACCESSION NUMBER: 2003-0031525 PASCAL  
COPYRIGHT NOTICE: Copyright .COPYRGT. 2003 INIST-CNRS. All rights reserved.  
TITLE (IN ENGLISH): Statin-induced expression of decay-accelerating factor protects vascular endothelium against complement-mediated injury

AUTHOR: MASON Justin C.; AHMED Zahra; MANKOFF Rivka; LIDINGTON Elaine A.; AHMAD Saifur; BHATIA Vinay; KINDERLERER Anne; RANDI Anna M.; HASKARD Dorian O.

CORPORATE SOURCE: British Heart Foundation Cardiovascular Medicine Unit, National Heart and Lung Institute, Imperial College, Hammersmith Hospital, London, United Kingdom

SOURCE: Circulation research, (2002), 91(8), 696-703, 41 refs.  
ISSN: 0009-7330 CODEN: CIRUAL

DOCUMENT TYPE: Journal

BIBLIOGRAPHIC LEVEL: Analytic

COUNTRY: United States

LANGUAGE: English

AVAILABILITY: INIST-7216, 354000105180670090

AN 2003-0031525 PASCAL

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AB Complement-mediated vascular injury is important in the pathophysiology of atherosclerosis and myocardial infarction. Because recent evidence shows that statins have beneficial effects on endothelial cell (EC) function independent of lipid lowering, we explored the hypothesis that statins modulate vascular EC resistance to complement

through the upregulation of complement-inhibitory proteins. Human umbilical vein and aortic ECs were treated with atorvastatin or simvastatin, and decay-accelerating factor (DAF), membrane cofactor protein, and CD59 expression was measured by flow cytometry. A dose-dependent increase in DAF expression of up to 4-fold was seen 24 to 48 hours after treatment. Statin-induced upregulation of DAF required increased steady-state mRNA and de novo protein synthesis. L-Mevalonate and geranylgeranyl pyrophosphate reversed the effect, confirming the role of 3-hydroxy-3-methylglutaryl coenzyme A reductase inhibition and suggesting that constitutive DAF expression is negatively regulated by geranylgeranylation. Neither farnesyl pyrophosphate nor squalene inhibited statin-induced DAF expression, suggesting that the effect is independent of cholesterol lowering. Statin-induced DAF upregulation was mediated by the activation of protein kinase Ca and inhibition of RhoA and was independent of phosphatidylinositol-3 kinase and NO activity. The increased DAF expression was functionally effective, resulting in significant reduction of C3 deposition and complement-mediated lysis of antibody-coated ECs. These observations provide evidence for a novel cytoprotective action of statins on vascular endothelium that is independent of the effect on lipids and results in enhanced protection against complement-mediated injury. Modulation of complement regulatory protein expression may contribute to the early beneficial effects of statins in reducing the morbidity and mortality associated with atherosclerosis.

L15 ANSWER 2 OF 9 BIOTECHNO COPYRIGHT 2008 Elsevier Science B.V. on STN  
ACCESSION NUMBER: 2001:32989238 BIOTECHNO  
TITLE: Role of the complement system in ischaemic heart disease potential for pharmacological intervention  
AUTHOR: Shernan S.K.; Collard C.D.  
CORPORATE SOURCE: Dr. C.D. Collard, Div. of Cardiovasc. Anesthesiology, Texas Heart Institute, MCI-226, PO Box 20345, Houston, TX 77225-0345, United States.  
E-mail: ccollard@heart.THI.TMC.edu  
SOURCE: BioDrugs, (2001), 15/9 (595-607), 133 reference(s)  
CODEN: BIDRF4 ISSN: 1173-8804  
DOCUMENT TYPE: Journal; General Review  
COUNTRY: New Zealand  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
AN 2001:32989238 BIOTECHNO  
AB The complement system is an innate, cytotoxic host defence system that normally functions to eliminate foreign pathogens. However, considerable evidence suggests that complement plays a key role in the pathophysiology of ischaemic heart disease (IHD). Experimental models of acute myocardial infarction (MI) and autopsy specimens taken from acute MI patients demonstrate that complement is selectively deposited in areas of infarction. Furthermore, inhibition of complement activation or depletion of complement components prior to myocardial reperfusion has been shown to reduce complement-mediated tissue injury in numerous animal models. IHD remains a leading cause of patient morbidity and mortality. Considerable effort in recent years has therefore been directed by biotechnology and pharmaceutical industries towards the development of novel, human complement inhibitors. Proposed anticomplement therapeutic strategies include the administration of naturally occurring or recombinant complement regulators, anticomplement monoclonal antibodies, and anticomplement receptor antagonists. Although data regarding the effectiveness of anticomplement therapy in humans is limited at present, a number of novel anticomplement therapeutic strategies are currently in clinical trials. The role of complement in IHD and potential for pharmacological intervention is reviewed.

L15 ANSWER 3 OF 9 BIOTECHNO COPYRIGHT 2008 Elsevier Science B.V. on STN  
DUPLICATE  
ACCESSION NUMBER: 2000:30724679 BIOTECHNO  
TITLE: Detection of a soluble form of the complement membrane attack complex inhibitor CD59 in plasma after acute myocardial infarction  
AUTHOR: Vakeva A.; Lehto T.; Takala A.; Meri S.  
CORPORATE SOURCE: Dr. A. Vakeva, Dept. of Bacteriology and Immunology, Haartman Institute, PO Box 21, FIN-00014 Helsinki, Finland.  
E-mail: antti.vakeva@helsinki.fi  
SOURCE: Scandinavian Journal of Immunology, (2000), 52/4 (411-414), 20 reference(s)  
CODEN: SJIMAX ISSN: 0300-9475  
DOCUMENT TYPE: Journal; Article  
COUNTRY: United Kingdom  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
AN 2000:30724679 BIOTECHNO  
AB Activation of the complement system has been documented in both experimental and clinical studies of acute myocardial infarction (AMI). Our earlier immunohistochemical studies have shown that the deposition of the membrane attack complex (MAC) of complement is associated with the loss of protectin (CD59), a glycosyl-phosphatidylinositol (GPI)-anchored sarcolemmal regulator of MAC, from the human and rat infarcted myocardium. In this study we detected, using an enzyme immunoassay (EIA), CD59 in the plasma of AMI patients at a concentration of  $23.0 \pm 8.4$  ng/ml (mean  $\pm$  SD; n = 17) at 4 h and  $27.3 \pm 11.8$  ng/ml (n = 24) at 24h after AMI. Both values were significantly higher than in healthy controls ( $7.8 \pm 6.4$  ng/ml; n = 20; P<0.001). The amount of CD59 correlated with the level of soluble terminal complement complexes (SC5b-9; r = 0.84; P < 0.01) in the plasmas of AMI patients. Our results suggest that myocardial damage leads to release of CD59 from the sarcolemmal cell membranes during AMI.

L15 ANSWER 4 OF 9 BIOTECHNO COPYRIGHT 2008 Elsevier Science B.V. on STN  
DUPLICATE  
ACCESSION NUMBER: 1999:29333807 BIOTECHNO  
TITLE: Complement regulators C1 inhibitor and CD59 do not significantly inhibit complement activation in Alzheimer disease  
AUTHOR: Yasojima K.; McGeer E.G.; McGeer P.L.  
CORPORATE SOURCE: P.L. McGeer, Department of Psychiatry, Kinsmen Lab. of Neurol. Research, University of British Columbia, Vancouver, BC V6T 1Z3, Canada.  
E-mail: mcgeerpl@interchange.ubc.ca  
SOURCE: Brain Research, (03 JUL 1999), 833/2 (297-301), 26 reference(s)  
CODEN: BRREAP ISSN: 0006-8993  
PUBLISHER ITEM IDENT.: S0006899399015140  
DOCUMENT TYPE: Journal; Article  
COUNTRY: Netherlands  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
AN 1999:29333807 BIOTECHNO  
AB Proteins characteristic of activated complement are associated with Alzheimer disease (AD) lesions. The classical complement pathway can be activated only when the influence of such endogenous regulators as C1-inhibitor (C1-inh) and CD59 are overcome. We used the

techniques of reverse transcriptase-polymerase chain reaction and Western blotting to assess the mRNA and protein levels of C1-inh and CD59 in AD and control brains in comparison with levels of the complement components with which they interact. The inhibitors were only slightly upregulated and then only in heavily affected areas of AD brain such as the entorhinal cortex, hippocampus, midtemporal gyrus and midfrontal gyms. The ratio of AD to control mRNAs in these four areas was 1.17 for C1-inh and 1.12 for CD59, compared to 3.06 for Clr, 2.67 for C1s, 2.35 for C5, 2.56 for C6, 2.42 for C7, 5.08 for C8 and 16.3 for C9. Peripheral organ expression of C1-inh and CD59 mRNAs was no different in AD than controls but was slightly upregulated in infarcted heart tissue. Again, the increase was small compared with that of the competitive complement components. These data indicate that the forces which upregulate and activate complement in AD and myocardial infarction are not effectively suppressed by the endogenous regulators, C1-inh and CD59.

L15 ANSWER 5 OF 9 PASCAL COPYRIGHT 2008 INIST-CNRS. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 1997-0246726 PASCAL

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TITLE (IN ENGLISH): Membrane attack complex of complement and 20 kDa homologous restriction factor (CD59) in myocardial infarction

AUTHOR: TADA T.; OKADA H.; OKADA N.; TATEYAMA H.; SUZUKI H.; TAKAHASHI Y.; EIMOTO T.

CORPORATE SOURCE: Department of Pathology, Nagoya City University Medical School, Kawasumi, Mizuho-cho, Mizuho-ku, Nagoya 467, Japan; Research Institute for Molecular Biology, Nagoya City University Medical School, Nagoya, Japan; Division of Pathology, Aichi Hospital, Okazaki, Japan; Division of Pathology, National Nagoya Hospital, Nagoya, Japan

SOURCE: Virchows Archiv, (1997), 340(4), 327-332, 42 refs.  
ISSN: 0945-6317

DOCUMENT TYPE: Journal

BIBLIOGRAPHIC LEVEL: Analytic

COUNTRY: Germany, Federal Republic of

LANGUAGE: English

AVAILABILITY: INIST-863, 354000064803970090

AN 1997-0246726 PASCAL

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AB In order to investigate the mechanism of deposition of the complement membrane attack complex (MAC) in cardiomyocytes in areas of human myocardial infarction, the 20 kDa homologous restriction factor of complement (HRF20; CD59) and complement components (Clq, C3d and MAC) were analysed immunohistochemically using specific antibodies. Myocardial tissues obtained at autopsy from nine patients who died of acute myocardial infarction were fixed in acetone and embedded in paraffin. The ages of the infarcts ranged from about 3.5 h to 12 days. In cases of myocardial infarction of 20 h or less, MAC deposition was shown in the infarcted cardiomyocytes without loss of HRF20. Where the duration was 4 days or more, the cardiomyocytes with MAC deposition in the infarcted areas also showed complete loss of HRF20. Outside the infarcts, HRF20 in the cardiomyocytes was well preserved without MAC deposition. The present study suggests that the initial MAC deposition in dead cardiomyocytes can occur as a result of degradation of plasma-membrane by a mechanism independent of complement-mediated injury to the membrane. Loss of HRF20 from dead cardiomyocytes may not be the initial cause of MAC deposition,

but may accelerate the deposition process of MAC in later stages of infarction.

L15 ANSWER 6 OF 9 PASCAL COPYRIGHT 2008 INIST-CNRS. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 1995-0260494 PASCAL  
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TITLE (IN ENGLISH): Activation of the terminal complement cascade in renal infarction  
AUTHOR: VAEKELA A.; MERI S.; LEHTO T.; LAURILA P.  
CORPORATE SOURCE: Univ. Helsinki, dep. bacteriology immunology, 00014 Helsinki, Finland; Univ. Helsinki, dep. pathology, Helsinki, Finland  
SOURCE: Kidney international, (1995), 47(3), 918-926, 55 refs.  
ISSN: 0085-2538 CODEN: KDYIA5

DOCUMENT TYPE: Journal  
BIBLIOGRAPHIC LEVEL: Analytic  
COUNTRY: United States  
LANGUAGE: English  
AVAILABILITY: INIST-15906, 354000056354620270

AN 1995-0260494 PASCAL  
CP Copyright .COPYRGT. 1995 INIST-CNRS. All rights reserved.  
AB Ischemic injury is an important cause of functional derangement in the kidney. The complement (C) system has previously been shown to be an important mediator of ischemic tissue injury in myocardial infarction. In the present study we therefore investigated the possible role of C in renal ischemic lesions. The deposition and distribution of various C components (C1q, C3c, C3d, C4, C5, C6, C9) and regulators [vitronectin, clusterin and protectin (CD59)] in human renal infarction lesions were studied by indirect immunofluorescence microscopy. Deposition of components of the terminal C complex (TCC), as well as vitronectin and clusterin, were observed throughout the infarcted areas. The strongest deposits were seen on the membranes of tubular epithelial cells and in the tubular lumina of the infarction areas, especially in the border zone between normal and infarcted tissue. Using markers for different segments of tubuli (Tamm Horsfall glycoprotein and brush border antigens) it was possible to localize deposits of TCC predominantly to the proximal tubuli. In the glomeruli of the infarcted areas deposits of TCC were seen as a crescent-like pattern at and immediately beneath the Bowman's capsule. The expression of cell membrane-associated protectin was diminished in tubular epithelial cells of the infarction lesions. A clue for the possible mechanism of C activation in renal infarction was obtained from in vitro experiments, in which the contact of normal human serum with urine was observed to lead to the generation of TCC. Thus, in renal ischemic lesions C may become activated when C components enter the intratubular urinary space of ischemic tubuli. Our results suggest that local C activation in association with ischemic renal injury leads to the generation of terminal C complexes and an inflammatory response whereby a healing process can begin

L15 ANSWER 7 OF 9 BIOTECHNO COPYRIGHT 2008 Elsevier Science B.V. on STN  
DUPLICATE

ACCESSION NUMBER: 1994:24172098 BIOTECHNO  
TITLE: Time course of complement activation and inhibitor expression after ischemic injury of rat myocardium  
AUTHOR: Vakeva A.; Morgan B.P.; Tikkanen I.; Helin K.; Laurila P.; Meri S.  
CORPORATE SOURCE: Bacteriology/Immunology Department, University of Helsinki, Haartmaninkatu 3, FIN-00014 Helsinki,

Finland.

SOURCE: American Journal of Pathology, (1994), 144/6  
(1357-1368)  
CODEN: AJPAA4 ISSN: 0002-9440

DOCUMENT TYPE: Journal; Article

COUNTRY: United States

LANGUAGE: English

SUMMARY LANGUAGE: English

AN 1994:24172098 BIOTECHNO

AB Activation of the complement (C) system has been documented in both experimental and clinical studies of myocardial infarction, but the exact time course and mechanisms leading to C activation have remained unclear. Our earlier postmortem study on human beings showed that formation of the membrane attack complex (MAC) of C was associated with loss of CD59 (protectin), an important sarcolemmal regulator of MAC, from the infarcted area. The recent discovery of a rat analogue of CD59 has now allowed the first experimental evaluation of the temporal and spatial relationship between C component deposition and loss of CD59 in acute myocardial infarction (AMI). After ligating the left coronary artery in rats the earliest sign of C activation, focal deposition of C3, was observed at 2 hours. Deposition of the early (C1, C3) and late pathway (C8, C9) components in the AMI lesions occurred at 3 hours. Glycophosphoinositol-anchored rat CD59 was expressed in the sarcolemmal membranes of normal cardiomyocytes. In Western blot analysis extracts of normal rat heart CD59 appeared as a band of 21 kd of molecular weight under nonreducing conditions. Loss of CD59 in the AMI lesions was observed in association with deposits of MAC from day one onward. Our results show that C activation universally accompanies AMI in vivo. It is initiated within 2 hours after coronary artery obstruction via deposition of C3, which may be due to generation of the alternative pathway C3 convertase in the ischemic area. Deposition of C1 and late C components also starts during the early hours (2 to 4 hours) after ischemia. Subsequent loss of the protective CD59 antigen may initiate postinjury clearance of the irreversibly damaged tissue.

L15 ANSWER 8 OF 9 BIOTECHNO COPYRIGHT 2008 Elsevier Science B.V. on STN  
DUPLICATE

ACCESSION NUMBER: 1993:24058161 BIOTECHNO

TITLE: Regulation of complement membrane attack complex formation in myocardial infarction

AUTHOR: Vakeva A.; Laurila P.; Meri S.

CORPORATE SOURCE: Bacteriology/Immunology Department, University of Helsinki, Haartmaninkatu 3, SF-00290 Helsinki, Finland.

SOURCE: American Journal of Pathology, (1993), 143/1 (65-75)

CODEN: AJPAA4 ISSN: 0002-9440

DOCUMENT TYPE: Journal; General Review

COUNTRY: United States

LANGUAGE: English

SUMMARY LANGUAGE: English

AN 1993:24058161 BIOTECHNO

AB Recent studies have suggested that the complement (C) system is involved in the development of tissue injury of myocardial infarction. As it is not known why the strictly controlled C system starts to react against autologous heart tissue, we have analyzed the expression of various membrane regulators of C (CR1, DAF, MCP, CD59, C8 binding protein) and the pattern of deposition of C components and plasma C regulators (C4b binding protein and vitronectin) in normal (n = 7) and infarcted (n = 13) human myocardium. In the infarcted myocardium deposits of the C membrane attack complex (MAC) were

observed by immunofluorescence microscopy, and lesions resembling the transmembrane channels of MAC were detected by transmission electron microscopy. CD59 and C8 binding protein were strongly expressed by muscle cells of normal myocardial tissue. Little or no CR1, MCP, and DAF was observed on these cells. The assembly of MAC was accompanied by the deposition of vitronectin (S-protein) and C4b binding protein in the infarcted areas of myocardium. In accordance with our earlier results the expression of CD59 but not of C8 binding protein was clearly diminished in the lesions. The results show that C8 binding protein, vitronectin, and C4b binding protein do not prevent complement attack against the infarcted myocardium but rather become codeposited with the MAC. Ischemia-induced transformation of nonviable cells into complement activators, acquired loss of resistance to the MAC by shedding of CD59, and recruitment of multifunctional serum proteins by MAC could thus constitute a general process aimed at the clearance of injured tissue.

L15 ANSWER 9 OF 9 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 5  
ACCESSION NUMBER: 93:57787 LIFESCI  
TITLE: Loss of expression of protectin (CD59) is associated with complement membrane attack complex deposition in myocardial infarction.  
AUTHOR: Vaekevae, A.; Laurila, P.; Meri, S.  
CORPORATE SOURCE: Dep. Bacteriol. and Immunol., Univ. Helsinki, SF-00290 Helsinki, Finland  
SOURCE: LAB. INVEST., (1992) vol. 67, no. 5, pp. 608-616.  
DOCUMENT TYPE: Journal  
FILE SEGMENT: M  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
AB Protectin (CD59) is a recently discovered inhibitor of the complement membrane attack complex (MAC). In the present study we investigated expression of protection in human heart and examined the relationship between MAC deposition and protectin in myocardial infarction. Glycophosphoinositol-anchored CD59 is expressed in the sarcolemmal membranes of normal heart but lost from infarcted myocardium.

=> (CD59) and (Unstable angina  
UNMATCHED LEFT PARENTHESIS 'AND (UNSTABLE'  
The number of right parentheses in a query must be equal to the number of left parentheses.

=> (CD59) and (Unstable angina)  
L16 0 FILE AGRICOLA  
L17 0 FILE BIOTECHNO  
L18 0 FILE CONFSCI  
L19 0 FILE HEALSAFE  
L20 0 FILE LIFESCI  
L21 0 FILE PASCAL

TOTAL FOR ALL FILES  
L22 0 (CD59) AND (UNSTABLE ANGINA)

=> CD59 and angina  
L23 0 FILE AGRICOLA  
L24 0 FILE BIOTECHNO  
L25 0 FILE CONFSCI  
L26 0 FILE HEALSAFE  
L27 0 FILE LIFESCI

L28 0 FILE PASCAL

TOTAL FOR ALL FILES

L29 0 CD59 AND ANGINA

=> (CD59 or (CD 59)) and atherosclerosis

L30 0 FILE AGRICOLA

L31 4 FILE BIOTECHNO

L32 0 FILE CONFSCI

L33 0 FILE HEALSAFE

L34 4 FILE LIFESCI

L35 9 FILE PASCAL

TOTAL FOR ALL FILES

L36 17 (CD59 OR (CD 59)) AND ATHEROSCLEROSIS

=> dup rem

ENTER L# LIST OR (END):136

PROCESSING COMPLETED FOR L36

L37 13 DUP REM L36 (4 DUPLICATES REMOVED)

=> d 137 ibib abs total

L37 ANSWER 1 OF 13 PASCAL COPYRIGHT 2008 INIST-CNRS. ALL RIGHTS RESERVED.  
on STN

ACCESSION NUMBER: 2008-0463474 PASCAL

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TITLE (IN ENGLISH): Brief Report : Accelerated Atherosclerosis  
in Low-Density Lipoprotein Receptor-Deficient Mice  
Lacking the Membrane-Bound Complement Regulator  
CD59

AUTHOR: SHENG YUN; LEUNG Viola W. Y.; BOTTO Marina; BOYLE  
Joseph J.; HASKARD Dorian O.

CORPORATE SOURCE: Bywaters Centre for Vascular Inflammation, National  
Heart and Lung Institute, Imperial College, London,  
United Kingdom; Division of Investigative Sciences,  
Imperial College, London, United Kingdom; Molecular  
Genetics and Rheumatology Section, Division of  
Medicine, Imperial College, London, United Kingdom

SOURCE: Arteriosclerosis, thrombosis, and vascular biology,  
(2008), 28(10), 1714-1716, 15 refs.

ISSN: 1079-5642 CODEN: ATVBFA

DOCUMENT TYPE: Journal

BIBLIOGRAPHIC LEVEL: Analytic

COUNTRY: United States

LANGUAGE: English

AVAILABILITY: INIST-19104, 354000185298500070

AN 2008-0463474 PASCAL

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AB Objective-Whereas studies in humans and animal models have suggested a  
role for complement activation in atherosclerosis, there has  
been little analysis of the importance of complement regulators. We  
tested the hypothesis that the terminal pathway inhibitor CD59  
plays an essential role in limiting the proinflammatory effects of  
complement activation. Methods and Results-CD59 gene targeted  
mice (CD59a.sup.-.sup./.sup.-) mice were crossed with low-density  
lipoprotein receptor-deficient (Ldlr.sup.-.sup./.sup.-) mice.  
CD59-deficient Ldlr.sup.-.sup./.sup.- mice had significantly more  
extensive en face Sudan IV staining of thoracoabdominal aorta than  
Ldlr.sup.-.sup./.sup.- single knock-outs, both after a low-fat diet

(6.51±0.36% versus 2.63±0.56%, P<0.001) or a high-fat diet (17.05±2.15% versus 7.69±1.17%, P<0.004). Accelerated lesion formation in CD59a.sup.-.sup./.sup.-/Ldlr.sup.-.sup./.sup.- mice on a high-fat diet was associated with increased lesional vascular smooth muscle cell (VSMC) number and fibrous cap formation. Conclusion-Our data show that CD59 deficiency accelerates the development of lesions and increases plaque VSMC composition. Assuming that the main function of CD59 is to prevent the development of C5b-9 membrane attack complexes, our observations are consistent with the terminal complement pathway having proatherogenic potential in the Ldlr.sup.-.sup./.sup.- mouse model, and highlight the importance of complement regulation.

L37 ANSWER 2 OF 13 LIFESCI COPYRIGHT 2008 CSA on STN

ACCESSION NUMBER: 2007:97822 LIFESCI

TITLE: Characterisation of the complement susceptibility of the rat aortic smooth muscle cell line A7r5

AUTHOR: Capey, Steven; Mosedale, James G.Q.; Van den Berg, Carmen W.

CORPORATE SOURCE: Department of Pharmacology, Therapeutics and Toxicology, Wales Heart Research Institute, Cardiff University, Wales College of Medicine, Heath Park, Cardiff CF144XN, United Kingdom; E-mail: vandenbergcw@cardiff.ac.uk

SOURCE: Molecular Immunology [Mol. Immunol.], (20070100) vol. 44, no. 4, pp. 608-614.

ISSN: 0161-5890.

DOCUMENT TYPE: Journal

FILE SEGMENT: F

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Complement (C) activation is thought to contribute to the initiation and progression of atherosclerosis. Proliferation of smooth muscle cells plays an important role in atherosclerotic plaque formation. Our aim was to investigate the suitability of the rat aortic smooth muscle cell line A7r5 as an in vitro model to study C-induced events in smooth muscle cells. A7r5 cells abundantly expressed membrane bound C-regulators (CReg) Crry and CD59 as assessed by flow- cytometry, but no DAF or MCP was detected. Using RT-PCR in addition to Crry and CD59, also mRNA for rat DAF but not for MCP was detected. Flow-cytometry of cells removed by EDTA instead of trypsin demonstrated that A7r5 did express cell surface DAF. Upon prolonged culturing under either logarithmic growing conditions or under conditions where cells were kept over-confluent, two different sub cell lines were obtained, one which had lost the expression of CD59, while the other showed increased expression of DAF and Crry. The change in expression of these CReg resulted in a change in C-susceptibility. Incubation of the A7r5 cells with human serum induced membrane attack complex dependent proliferation. Transfection with human CD59 efficiently protected the cells from C-mediated killing and C-induced cell proliferation. Our results show that A7r5 cells can be used as an in vitro model for C-induced events, but care has to be taken to use the cells at an early stage of passaging as they readily change their phenotype.

L37 ANSWER 3 OF 13 PASCAL COPYRIGHT 2008 INIST-CNRS. ALL RIGHTS RESERVED.  
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ACCESSION NUMBER: 2007-0054742 PASCAL

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TITLE (IN ENGLISH): Inhibition of complement component C3 reduces vein graft atherosclerosis in apolipoprotein E3-leiden transgenic mice

AUTHOR: SCHEPERS A.; DE VRIES M. R.; VAN LEUVEN C. J.;  
GRIMBERGEN J. M.; HOLERS V. M.; DAHA M. R.; VAN BOCKEL  
J. H.; QUAX P. H. A.

CORPORATE SOURCE: Gaubius Laboratory, TNO Quality of Life, Leiden,  
Netherlands; Department of Vascular Surgery, Leiden  
University Medical Centre, Leiden, Netherlands;  
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Health Sciences Center, Denver, United States;  
Department of Renal Diseases, Leiden University  
Medical Centre, Leiden, Netherlands

SOURCE: Circulation : (New York, N.Y.), (2006), 114(25),  
2831-2838, 31 refs.  
ISSN: 0009-7322 CODEN: CIRCAZ

DOCUMENT TYPE: Journal

BIBLIOGRAPHIC LEVEL: Analytic

COUNTRY: United States

LANGUAGE: English

AVAILABILITY: INIST-5907, 354000145259280120

AN 2007-0054742 PASCAL

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AB Background-Venous bypass grafts may fail because of development of intimal hyperplasia and accelerated atherosclerosis. Inflammation plays a major role in these processes. Complement is an important part of the immune system and participates in the regulation of inflammation. The exact role of complement in the process of accelerated atherosclerosis of vein grafts has not yet been explored, however. Methods and Results-To assess the role of complement in the development of vein graft atherosclerosis, a mouse model, in which a venous interposition was placed in the common carotid artery, was used. In this model, vein graft thickening appeared within 4 weeks. The expression of complement components was studied with the use of immunohistochemistry on sections of the thickened vein graft. Clq, C3, C9, and the regulatory proteins CD59 and complement receptor-related gene y could be detected in the lesions 4 weeks after surgery. Quantitative mRNA analysis for Clq, C3, CD59, and complement receptor-related gene y revealed expression of these molecules in the thickened vein graft, whereas C9 did not show local mRNA expression. Furthermore, interference with C3 activation with complement receptor-related gene y-Ig was associated with reduced vein graft thickening, reduced C3 and C9 deposition, and reduced inflammation as assessed by analysis of influx of inflammatory cells, such as leukocytes, T cells, and monocytes. In addition, changes in apoptosis and proliferation were observed. When C3 was inhibited by cobra venom factor, a similar reduction in vein graft thickening was observed. Conclusions-The complement cascade is involved in vein graft thickening and may be a target for therapy in vein graft failure disease.

L37 ANSWER 4 OF 13 LIFESCI COPYRIGHT 2008 CSA on STN  
ACCESSION NUMBER: 2005:112999 LIFESCI  
TITLE: IL-4 and IL-13 Induce Protection of Porcine Endothelial Cells from Killing by Human Complement and from Apoptosis through Activation of a Phosphatidylinositide 3-Kinase/Akt Pathway

AUTHOR: Grehan, John F.; Levay-Young, Brett K.; Fogelson, Jeremy L.; Francois-Bongarcon, Vanessa; Benson, Barbara A.; Dalmasso, Agustin P.

CORPORATE SOURCE: Departments of Surgery and Laboratory Medicine and Pathology, University of Minnesota School of Medicine, Minneapolis, MN 55455

SOURCE: Journal of Immunology [J. Immunol.], (20050801) vol. 175, no. 3, pp. 1903-1910.

ISSN: 0022-1767.

DOCUMENT TYPE: Journal

FILE SEGMENT: F

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Vascular endothelial cells (EC) perform critical functions that require a balance of cell survival and cell death. EC death by apoptosis and EC activation and injury by the membrane attack complex of complement are important mechanisms in atherosclerosis and organ graft rejection. Although the effects of various cytokines on EC apoptosis have been studied, little is known about their effects on complement-mediated EC injury. Therefore, we studied the abilities of various cytokines to induce protection of porcine aortic EC against apoptosis and killing by human complement, a model of pig-to-human xenotransplantation. We found that porcine EC incubated with IL-4 or IL-13, but not with IL-10 or IL-11, became protected from killing by complement and apoptosis induced by TNF-alpha plus cycloheximide. Maximal protection required 10 ng/ml IL-4 or IL-13, developed progressively from 12 to 72 h of incubation, and lasted 48-72 h after cytokine removal. Protection from complement was not associated with reduced complement activation, C9 binding, or changes in CD59 expression. Inhibition of PI3K prevented development of protection; however, inhibition of p38 MAPK or p42/44 MAPK had no effect. IL-4 and IL-13 induced rapid phosphorylation of Akt. Although protection was inhibited by an Akt inhibitor and a dominant negative Akt mutant transduced into EC, it was induced by transduction of EC with the constitutively active Akt variant, myristylated Akt. We conclude that IL-4 and IL-13 can induce protection of porcine EC against killing by apoptosis and human complement through activation of the PI3K/Akt signaling pathway.

L37 ANSWER 5 OF 13 LIFESCI COPYRIGHT 2008 CSA on STN

ACCESSION NUMBER: 2006:91847 LIFESCI

TITLE: Porcine complement regulators protect aortic smooth muscle cells poorly against human complement-induced lysis and proliferation: consequences for xenotransplantation

AUTHOR: Capey, Steven; van den Berg, Carmen W.\*

CORPORATE SOURCE: Department of Pharmacology, Therapeutics and Toxicology, Wales Heart Research Institute, Cardiff University, Wales College of Medicine, Cardiff, CF144XN, UK; E-mail: vandenbergcw@cardiff.ac.uk

SOURCE: Xenotransplantation, (20050500) vol. 12, no. 3, pp. 217-226  
Figures, 6..  
ISSN: 0908-665X.

DOCUMENT TYPE: Journal

FILE SEGMENT: F

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Background: Accelerated atherosclerosis after transplantation has been observed and is characterized by smooth muscle cell proliferation in the graft. Porcine cells are frequently used in models of atherosclerosis and porcine organs are considered for use in transplantation. Complement (C) activation is known to play a major role in rejection of xenografts and is also considered to play a role in the development of atherosclerosis. The aim of this study was to investigate the expression and function of membrane bound regulators of complement (CReg) on porcine aortic smooth muscle cells (PASMC).

Methods: The PASMC were assessed for expression of CReg and susceptibility to lysis by human C by flow-cytometry. The effect of various cytokines on CReg expression and C-susceptibility was investigated. The ability of human C to induce cell proliferation was assessed using the Alamar blue assay. Results: The PASMC only express the CReg membrane cofactor protein (MCP) and CD59 on their cell surface. MCP expression was

increased by interleukin (IL)-4. In contrast to porcine aortic endothelial cells (PAEC), PASMC were found to be surprisingly sensitive to C-mediated lysis, mainly due to a low level of expression of CD59. Human C-induced proliferation of PASMC, which was dependent on complete membrane attack complex (MAC) formation. Conclusions: Endogenously expressed CReg on PASMC poorly protect these cells to human C. Human C can induce proliferation of PASMC. In order to prevent accelerated atherosclerosis in porcine xenografts, increased levels of CReg not only have to be obtained on the endothelial cells but also on the smooth muscle cells.

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ACCESSION NUMBER: 2004-0362628 PASCAL  
COPYRIGHT NOTICE: Copyright .COPYRGT. 2004 INIST-CNRS. All rights reserved.  
TITLE (IN ENGLISH): C-Reactive protein upregulates complement-inhibitory factors in endothelial cells  
AUTHOR: LI Shu-Hong; SZMITKO Paul E.; WEISEL Richard D.; WANG Chao-Hung; FEDAK Paul W. M.; LI Ren-Ke; MICKLE Donald A. G.; VERMA Subodh  
CORPORATE SOURCE: Division of Cardiac Surgery, University of Toronto, Ontario, Canada  
SOURCE: Circulation : (New York, N.Y.), (2004), 109(7), 833-836, 21 refs.  
DOCUMENT TYPE: ISSN: 0009-7322 CODEN: CIRCAZ  
BIBLIOGRAPHIC LEVEL: Journal; Short communication  
COUNTRY: Analytic  
LANGUAGE: United States  
AVAILABILITY: English  
INIST-5907, 354000119284480070  
AN 2004-0362628 PASCAL  
CP Copyright .COPYRGT. 2004 INIST-CNRS. All rights reserved.  
AB Background-Because complement-mediated vascular injury participates in atherosclerosis and C-reactive protein (CRP) can activate the complement cascade, we sought to determine whether CRP affects the expression of the protective complement-inhibitory factors on the cell surface of endothelial cells (ECs). Methods and Results-Human coronary artery or human saphenous vein ECs were incubated with CRP (0 to 100 µg/mL, 0 to 72 hours), and the expression of the complement-inhibitory proteins decay-accelerating factor (DAF), membrane cofactor protein (CD46), and CD59 were measured by flow cytometry. Incubation with CRP resulted in a significant increase in the expression of all 3 proteins. CRP-induced upregulation of DAF required increased steady-state mRNA and de novo protein synthesis. The increased expression of complement-inhibitory proteins was functionally effective, resulting in significant reduction of complement-mediated lysis of antibody-coated human saphenous vein ECs. Conclusions-These observations provide evidence for a possible protective role for CRP in atherogenesis.

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ACCESSION NUMBER: 2003-0031525 PASCAL  
COPYRIGHT NOTICE: Copyright .COPYRGT. 2003 INIST-CNRS. All rights reserved.  
TITLE (IN ENGLISH): Statin-induced expression of decay-accelerating factor protects vascular endothelium against complement-mediated injury  
AUTHOR: MASON Justin C.; AHMED Zahra; MANKOFF Rivka; LIDINGTON Elaine A.; AHMAD Saifur; BHATIA Vinay; KINDLERERER Anne; RANDI Anna M.; HASKARD Dorian O.

CORPORATE SOURCE: British Heart Foundation Cardiovascular Medicine Unit,  
National Heart and Lung Institute, Imperial College,  
Hammersmith Hospital, London, United Kingdom  
SOURCE: Circulation research, (2002), 91(8), 696-703, 41 refs.  
ISSN: 0009-7330 CODEN: CIRUAL  
DOCUMENT TYPE: Journal  
BIBLIOGRAPHIC LEVEL: Analytic  
COUNTRY: United States  
LANGUAGE: English  
AVAILABILITY: INIST-7216, 354000105180670090  
AN 2003-0031525 PASCAL  
CP Copyright .COPYRGT. 2003 INIST-CNRS. All rights reserved.  
AB Complement-mediated vascular injury is important in the pathophysiology of atherosclerosis and myocardial infarction. Because recent evidence shows that statins have beneficial effects on endothelial cell (EC) function independent of lipid lowering, we explored the hypothesis that statins modulate vascular EC resistance to complement through the upregulation of complement-inhibitory proteins. Human umbilical vein and aortic ECs were treated with atorvastatin or simvastatin, and decay-accelerating factor (DAF), membrane cofactor protein, and CD59 expression was measured by flow cytometry. A dose-dependent increase in DAF expression of up to 4-fold was seen 24 to 48 hours after treatment. Statin-induced upregulation of DAF required increased steady-state mRNA and de novo protein synthesis. L-Mevalonate and geranylgeranyl pyrophosphate reversed the effect, confirming the role of 3-hydroxy-3-methylglutaryl coenzyme A reductase inhibition and suggesting that constitutive DAF expression is negatively regulated by geranylgeranylation. Neither farnesyl pyrophosphate nor squalene inhibited statin-induced DAF expression, suggesting that the effect is independent of cholesterol lowering. Statin-induced DAF upregulation was mediated by the activation of protein kinase Ca and inhibition of RhoA and was independent of phosphatidylinositol-3 kinase and NO activity. The increased DAF expression was functionally effective, resulting in significant reduction of C3 deposition and complement-mediated lysis of antibody-coated ECs. These observations provide evidence for a novel cytoprotective action of statins on vascular endothelium that is independent of the effect on lipids and results in enhanced protection against complement-mediated injury. Modulation of complement regulatory protein expression may contribute to the early beneficial effects of statins in reducing the morbidity and mortality associated with atherosclerosis.

L37 ANSWER 8 OF 13 BIOTECHNO COPYRIGHT 2008 Elsevier Science B.V. on STN  
ACCESSION NUMBER: 2002:36398266 BIOTECHNO  
TITLE: Identification of genes induced by oxidized  
phospholipids in human aortic endothelial cells  
AUTHOR: Reddy S.T.; Grijalva V.; Ng C.; Hassan K.; Hama S.;  
Mottahedeh R.; Wadleigh D.J.; Navab M.; Fogelman A.M.  
CORPORATE SOURCE: S.T. Reddy, Department of Medicine, University of  
California Los Angeles, A8-131 CHS, 650 Charles E.  
Young Drive South, Los Angeles, CA 90095, United  
States.  
E-mail: sreddy@mednet.ucla.edu  
SOURCE: Vascular Pharmacology, (01 APR 2002), 38/4 (211-218),  
43 reference(s)  
CODEN: VPAHAJ ISSN: 1537-1891  
PUBLISHER ITEM IDENT.: S1537189102001714  
DOCUMENT TYPE: Journal; Article  
COUNTRY: United States  
LANGUAGE: English  
SUMMARY LANGUAGE: English

AN 2002:36398266 BIOTECHNO  
AB Oxidized-L- $\alpha$ -1-Palmitoyl-2-Arachidonoyl-sn-glycero-3-  
Phosphorylcholine (Ox-PAPC), a component of mildly oxidized/minimally  
modified low-density lipoprotein (MM-LDL), accounts for many of the  
biological activities of MM-LDL. Having hypothesized that Ox-PAPC  
initiates gene expression changes in endothelial cells that result in  
enhanced endothelial/monocyte interactions and the subsequent development  
of atherosclerotic lesions, we used the suppression subtractive  
hybridization (SSH) procedure to compare mRNA isolated from PAPC-treated  
human aortic endothelial cells (HAEC) with mRNA isolated from  
Ox-PAPC-treated cells. Genes induced by Ox-PAPC but not by PAPC in HAEC  
included genes involved in signal transduction, extracellular matrix,  
growth factors, chemokines and several genes with unknown functions. The  
observed pattern of gene induction suggests that Ox-PAPC may play  
multiple roles in angiogenesis, atherosclerosis, and  
inflammation and wound healing. .COPYRGT. 2002 Elsevier Science Inc. All  
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ACCESSION NUMBER: 2001-0358471 PASCAL  
COPYRIGHT NOTICE: Copyright .COPYRGT. 2001 INIST-CNRS. All rights  
reserved.  
TITLE (IN ENGLISH): Complement components, but not complement inhibitors,  
are upregulated in atherosclerotic plaques  
AUTHOR: YASOJIMA K.; SCHWAB C.; MCGEER E. G.; MCGEER P. L.  
CORPORATE SOURCE: Kinsmen Laboratory of Neurological Research,  
Department of Psychiatry, University of British  
Columbia, Vancouver, BC V6T 1Z3, Canada  
SOURCE: Arteriosclerosis, thrombosis, and vascular biology,  
(2001), 21(7), 1214-1219, 37 refs.  
ISSN: 1079-5642 CODEN: ATVBFA

DOCUMENT TYPE: Journal  
BIBLIOGRAPHIC LEVEL: Analytic  
COUNTRY: United States  
LANGUAGE: English  
AVAILABILITY: INIST-19104, 354000099049060210

AN 2001-0358471 PASCAL  
CP Copyright .COPYRGT. 2001 INIST-CNRS. All rights reserved.  
AB Complement activation occurs in atherosclerotic plaques. The capacity of  
arterial tissue to inhibit this activation through generation of the  
complement regulators C1 inhibitor, decay accelerating factor, membrane  
cofactor protein (CD46), C4 binding protein (C4BP), and protectin (CD59)  
was evaluated in pairs of aortic atherosclerotic plaques  
and nearby normal artery from 11 human postmortem specimens. All 22  
samples produced mRNAs for each of these proteins. The ratios of plaque  
versus normal artery pairs was not significantly different from unity for  
any of these inhibitors. However, in plaques, the mRNAs for C1r and C1s,  
the substrates for the C1 inhibitor, were increased 2.35-and 4.96-fold,  
respectively, compared with normal artery; mRNA for C4, the target for  
C4BP, was elevated 1.34-fold; and mRNAs for C7 and C8, the targets for  
CD59, were elevated 2.61- and 3.25-fold, respectively. By Western  
blotting and immunohistochemistry, fraction Bb of factor B, a marker of  
alternative pathway activation, was barely detectable in plaque and  
normal arterial tissue. These data indicate that it is primarily the  
classical, not the alternative pathway, that is activated in plaques and  
that key inhibitors are not upregulated to defend against this  
activation.

L37 ANSWER 10 OF 13 BIOTECHNO COPYRIGHT 2008 Elsevier Science B.V. on STN  
DUPLICATE

ACCESSION NUMBER: 2000:30770374 BIOTECHNO  
TITLE: Induction of decay-accelerating factor by thrombin through a protease-activated receptor 1 and protein kinase C-dependent pathway protects vascular endothelial cells from complement-mediated injury  
AUTHOR: Lidington E.A.; Haskard D.O.; Mason J.C.  
CORPORATE SOURCE: J.C. Mason, BHF Cardiovascular Medicine Unit, National Heart and Lung Institute, Hammersmith Hospital, Du Cane Rd, London W12 ONN, United Kingdom.  
E-mail: justin.mason@ic.ac.uk  
SOURCE: Blood, (15 OCT 2000), 96/8 (2784-2792), 74 reference(s)  
DOCUMENT TYPE: Journal; Article  
COUNTRY: United States  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
AN 2000:30770374 BIOTECHNO  
AB There is increasing evidence for functional crosstalk between inflammatory and thrombotic pathways in inflammatory vascular diseases such as atherosclerosis and vasculitis. Thus, complement activation on the endothelial cell (EC) surface during inflammation may generate thrombin via the synthesis of tissue factor. We explored the hypothesis that thrombin induces EC expression of the complement-regulatory proteins decay-accelerating factor (DAF), membrane cofactor protein (MCP), and CD59 and that this maintains vascular integrity during coagulation associated with complement activation. Thrombin increased DAF expression on the surface of ECs by 4-fold in a dose- and time-dependent manner as measured by flow cytometry. DAF upregulation was first detectable at 6 hours and maximal 24 hours poststimulation, whereas no up-regulation of CD59 or MCP was seen. Thrombin-induced expression required increased DAF messenger RNA and de novo protein synthesis. The response depended on activation of protease-activated receptor 1 (PAR1) and was inhibited by pharmacologic antagonists of protein kinase C (PKC), p38 and p42/44 mitogen-activated protein kinase, and nuclear factor- $\kappa$ B. The increased DAF expression was functionally relevant because it significantly reduced C3 deposition and complement-mediated EC lysis. Thus, thrombin - generated at inflammatory sites in response to complement activation - is a physiologic agonist for the PKC-dependent pathway of DAF regulation, thereby providing a negative feedback loop protecting against thrombosis in inflammation. (C) 2000 by The American Society of Hematology.

L37 ANSWER 11 OF 13 BIOTECHNO COPYRIGHT 2008 Elsevier Science B.V. on STN  
DUPLICATE  
ACCESSION NUMBER: 1999:29258975 BIOTECHNO  
TITLE: Glycosylphosphatidylinositol-specific phospholipase D is expressed by macrophages in human atherosclerosis and colocalizes with oxidation epitopes  
AUTHOR: O'Brien K.D.; Pineda C.; Chiu W.S.; Bowen R.; Deeg M.A.  
CORPORATE SOURCE: Dr. K.D. O'Brien, Division of Cardiology, Box 356422, University of Washington, Seattle, WA 98195-6422, United States.  
E-mail: cardiac@u.washington.edu  
SOURCE: Circulation, (08 JUN 1999), 99/22 (2876-2882), 43 reference(s)  
DOCUMENT TYPE: Journal; Article  
CODEN: CIRCAZ ISSN: 0009-7322

COUNTRY: United States  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
AN 1999:29258975 BIOTECHNO  
AB Background - Glycosylphosphatidylinositol-specific phospholipase D (GPI-PLD) may play an important role in inflammation, because it can hydrolyze the GPI anchors of several inflammatory membrane proteins (eg, CD106, CD55, and CD59) and its hydrolytic products upregulate macrophage cytokine expression (eg, interleukin-1 and tumor necrosis factor- $\alpha$ ). Because of its potential regulatory role in inflammatory reactions, we hypothesized that GPI-PLD might be expressed in atherosclerosis. Methods and Results - Immunohistochemistry using human GPI-PLD-specific rabbit polyclonal antiserum was performed on a total of 83 nonatherosclerotic and atherosclerotic human coronary arteries from 23 patients. Macrophages, smooth muscle cells, apoA-I, and oxidation epitopes also were identified immunohistochemically. Cell-associated GPI-PLD was detected in 95% of atherosclerotic segments, primarily on a subset of macrophages. Extracellular GPI-PLD was present in only 30% of atherosclerotic segments and localized to regions with extracellular apoA-I. In contrast, GPI-PLD was not detected in nonatherosclerotic segments. Expression of GPI- PLD mRNA by human macrophages was confirmed in vitro by reverse transcription/polymerase chain reaction. Further studies demonstrated that GPI-PLD-positive plaque macrophages contained oxidation epitopes, suggesting a link between oxidant stress and GPI-PLD expression. This possibility was supported by studies in which exposure of a macrophage cell line to H.sub.20.sub.2 led to a 50 ± 3% increase in steady-state GPI-PLD mRNA levels. Conclusions - Collectively, these results suggest that oxidative processes may regulate GPI-PLD expression and suggest role for GPI-PLD in inflammation and in the pathogenesis of atherosclerosis.

L37 ANSWER 12 OF 13 BIOTECHNO COPYRIGHT 2008 Elsevier Science B.V. on STN  
DUPLICATE

ACCESSION NUMBER: 1999:29318544 BIOTECHNO  
TITLE: mRNA expression of complement components and regulators in rat arterial smooth muscle cells  
AUTHOR: Li W.; Tada T.; Miwa T.; Okada N.; Ito J.-I.; Okada H.; Tateyama H.; Eimoto T.  
CORPORATE SOURCE: Dr. T. Tada, Department of Pathology, Nagoya City Univ. Medical School, Mizuho-ku, Nagoya, Aichi 467-8601, Japan.  
E-mail: ttada@med.nagoya-cu.ac.jp  
SOURCE: Microbiology and Immunology, (1999), 43/6 (585-593), 65 reference(s)  
CODEN: MIIMDV ISSN: 0385-5600  
DOCUMENT TYPE: Journal; Article  
COUNTRY: Japan  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
AN 1999:29318544 BIOTECHNO  
AB The presence of C5b-9 complexes, some complement regulators, and abundant cytokines in atherosclerotic lesions has been reported. However, it is unclear whether these complement-associated proteins are produced by vascular smooth muscle cells (SMCs) and how they are influenced by the cytokines. In the present study, we demonstrated, by the reverse transcription-polymerase chain reaction method, the mRNA expression of complement components (C3, C4, and C5) and membrane regulators (decay-accelerating factor, membrane cofactor protein, Crry, and CD59) in cultured SMCs derived from the rat carotid artery. The expression of C9 mRNA was also induced upon stimulation by interferon-gamma (IFN- $\gamma$ ), tumor necrosis factor- alpha (TNF- $\alpha$ ) and/or

lipopolysaccharide (LPS). Northern blot analysis showed that the mRNA expression of C3, C4, DAF and Crry was up-regulated, but that of CD59 was down-regulated by IFN- $\gamma$ , TNF- $\alpha$  and/or LPS alone or by synergy. The increase of C3 mRNA by TNF- $\alpha$  or LPS and that of C4 mRNA by IFN- $\gamma$  was induced in a dose-dependent manner. The results indicate that the arterial SMCs of rat have the ability to produce complement components and regulators, which is affected by cytokines and/or LPS. Since atherosclerosis is characterized by the intimal proliferation of SMCs, the complement system including its regulators may be involved in the pathogenesis of the disease.

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ACCESSION NUMBER: 1993-0050431 PASCAL  
TITLE (IN ENGLISH): QD59 (homologous restriction factor 20), a plasma membrane protein that protects against complement C5b-9 attack, in human atherosclerotic lesions  
AUTHOR: SEIFERT P. S.; ROTH I.; SCHMIEDT W.; OELERT H.; OKADA N.; OKADA H.; BHAKDI S.  
CORPORATE SOURCE: Johannes Gutenberg univ., inst. medical microbiology,  
6500 Mainz, Germany, Federal Republic of  
Atherosclerosis, (1992), 96(2-3), 135-145, 19 refs.  
SOURCE: ISSN: 0021-9150  
DOCUMENT TYPE: Journal  
BIBLIOGRAPHIC LEVEL: Analytic  
COUNTRY: Netherlands  
LANGUAGE: English  
AVAILABILITY: INIST-1713, 354000031710230050  
AN 1993-0050431 PASCAL  
AB Blood cells express a cell membrane protein, termed homologous restriction factor 20 (HRF20) and identical to CD59, that can inhibit complement C5b-9 insertion into their membranes. In this report, we investigated by immunohistochemistry whether CD59 was present on cells in human atherosclerotic lesions since membranous C5b-9(m) has been found in lesions. Using a monoclonal anti-CD59 antibody, a cellular CD59 staining pattern was apparent in nearly all lesion specimens